

# FISHERY MARKET NEWS

OCTOBER 1945 - SUPPLEMENT

FAO - WITH SPECIAL REFERENCE TO FISHERIES

## CONTENTS

|  | PAGE               |
|--|--------------------|
| INTRODUCTION .....   | 2                  |
| REPORT OF FISHERIES COMMITTEE .....  | 6                  |
| I - COLLECTION, ANALYSIS, INTERPRETATION, AND DISSEMINATION<br>OF INFORMATION .....                        | 6                  |
| II - SCIENTIFIC, TECHNOLOGICAL, SOCIOLOGICAL, AND ECONOMIC RESEARCH .....                                  | 8                  |
| III - EDUCATION .....  | 10                 |
| IV - CONSERVATION AND DEVELOPMENT .....  | 10                 |
| V - PROCESSING, MARKETING, AND DISTRIBUTION .....  | 11                 |
| VI - NATIONAL AND INTERNATIONAL CREDITS .....  | 12                 |
| VII - COMMODITY ARRANGEMENTS .....   | 12                 |
| VIII - ADVISORY COMMITTEE .....  | 13                 |
| REPORT OF THE STATISTICS COMMITTEE .....   | 13                 |
| REPORT OF THE MARKETING COMMITTEE .....  | 13                 |
| -----  |                    |
| PHOTOGRAPH OF THE MEMBERS OF THE FISHERIES COMMITTEE .....   | 3                  |
| LISTING OF THE PERMANENT ADDRESSES AND TITLES OF THOSE ATTENDING THE<br>FISHERIES COMMITTEE MEETINGS ..... | 14                 |
| -----  |                    |
| FIGURES: WORLD COMMERCIAL FISHERY PRODUCTION BY COUNTRIES .....  | 5                  |
| WORLD FISHERY PRODUCTION BY WATERS .....   | 7                  |
| WORLD FISHERY PRODUCTION BY HEMISPHERES .....  | 7                  |
| WORLD FISHERY PRODUCTION BY CONTINENTS .....   | 7                  |
| -----  |                    |
| TABLES: PRODUCTION PER CAPUT IN VARIOUS COUNTRIES .....  | 14                 |
| WHALE PRODUCTION .....   | 14                 |
| COMMERCIAL FISHERIES OF THE WORLD .....  | 18                 |
| -----  |                    |
| FISHERY RESOURCES OF THE UNITED STATES .....   | OUTSIDE BACK COVER |

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FISH AND WILDLIFE SERVICE  
WASHINGTON



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DEPARTMENT OF THE INTERIOR  
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# FISHERY MARKET NEWS

A REVIEW OF CONDITIONS AND TRENDS OF THE FISHERY INDUSTRIES  
PREPARED IN THE DIVISION OF COMMERCIAL FISHERIES

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## FAO - with Special Reference to Fisheries

By A. W. Anderson\*

In May and June of 1943, the United Nations Conference on Food and Agriculture was held at Hot Springs, Virginia. This Conference established an Interim Commission on Food and Agriculture which drafted a constitution for a proposed Food and Agriculture Organization of the United Nations. The formal convening of the first session of FAO - as it immediately became designated - occurred in Quebec on October 16, 1945, when the constitution was signed by delegates from 30 of the nations present at Hot Springs. Before the session concluded, the number of nations accepting the principles of FAO increased to over 40. The purposes for which FAO was established, as outlined in the constitution, are as follows:

Raising levels of nutrition and standards of living of the peoples under their respective jurisdictions,

securing improvements in the efficiency of the production and distribution of all food and agricultural products,

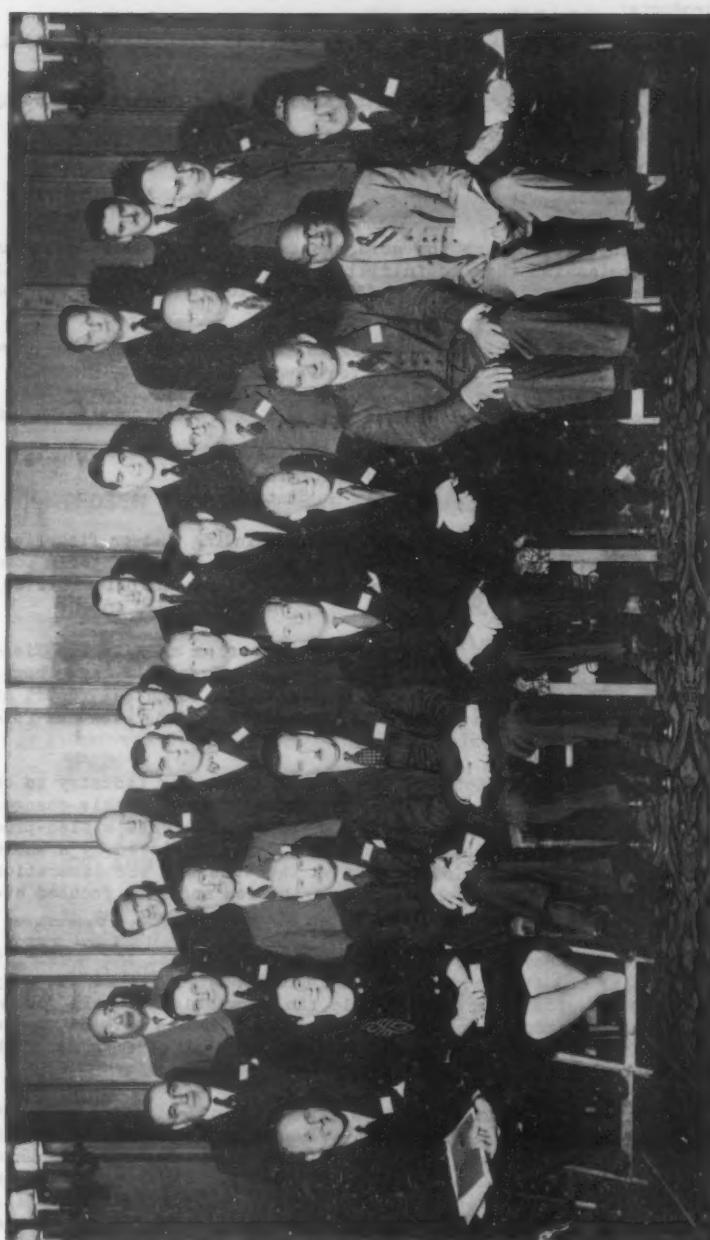
bettering the condition of rural populations,

and thus contributing toward an expanding world economy.

The functions of FAO involve the collection and dissemination of information, the promotion and recommendation of national and international action, and the furnishing of such assistance and the organization of such missions as may be requested. The specific functions, as listed in the constitution follow:

1. The Organization shall collect, analyze, interpret, and disseminate information relating to nutrition, food, and agriculture.
2. The Organization shall promote and, where appropriate, shall recommend national and international action with respect to
  - (a) Scientific, technological, social, and economic research relating to nutrition, food, and agriculture;
  - (b) the improvement of education and administration relating to nutrition, food, and agriculture, and the spread of public knowledge of nutritional and agricultural science and practice;

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NOTE: For the permanent addresses and titles of those attending Fisheries Committee meetings see p. 14.



MEMBERS OF THE FISHERIES COMMITTEE

|               |                        |                        |                          |                    |                          |                         |
|---------------|------------------------|------------------------|--------------------------|--------------------|--------------------------|-------------------------|
| ROWS<br>REAR: | PHILIPPINES<br>RUIZ    | NORWAY<br>GERHARDSEN   | NETHERLANDS<br>POTTINGER | FRANCE<br>VAN DIJK | CANADA<br>PREONTAINE     | SECRETARIAT<br>TREMBLAY |
| CENTER:       | UNITED KINGDOM<br>DUNN | SOUTH AFRICA<br>DRESDT | UNITED STATES<br>LABRTE  | CANADA<br>ANDERSON | AUSTRALIA<br>MURRAY      | CANADA<br>COVERN        |
| FRONT:        | DENMARK<br>JULI        | SECRETARIAT<br>LOVE    | CANADA<br>FINN           | ICELAND<br>GUSHUE  | NORMANDY<br>THORES       | INDIA<br>PRASHAD        |
| ABSENT:       | AUSTRALIA<br>GARSTON   | —                      | —                        | —                  | INTERPRETER<br>TERRIN    | FRANCE<br>TERRIN        |
|               |                        | BELGIUM<br>LAHMAND     | CHINA<br>COLLIP          | CHINA<br>WANG      | NEW ZEALAND<br>GONTALEZ  | NEW ZEALAND<br>HOLLOWAY |
|               |                        | —                      | —                        | —                  | PANAMA<br>HEUTEMATTE     | —                       |
|               |                        |                        |                          |                    | UNITED STATES<br>GARDNER | VENUEZUELA<br>NIKISHIN  |
|               |                        |                        |                          |                    |                          | FALCON-BRITCENO<br>CALE |

- (c) the conservation of natural resources and the adoption of improved methods of agricultural production;
- (d) the improvement of processing, marketing, and distribution of food and agricultural products;
- (e) the adoption of policies for the provision of adequate agricultural credit, national and international;
- (f) the adoption of international policies with respect to agricultural commodity arrangements.

3. It shall also be the function of the Organization

- (a) To furnish such technical assistance as governments may request;
- (b) to organize, in cooperation with the governments concerned, such missions as may be needed to assist them to fulfill obligations arising from their acceptance of the recommendations of the United Nations Conference on Food and Agriculture; and
- (c) generally to take all necessary and appropriate action to implement the purposes of the Organization as set forth in the Preamble.

Development of a program of work for FAO was delegated to six main committees in Quebec:

|                               |            |
|-------------------------------|------------|
| Nutrition and Food Management | Fisheries  |
| Agriculture                   | Marketing  |
| Forestry and Forest Products  | Statistics |

As a basis for their discussions, five of these committees, including that on fisheries, were able to use excellent technical reports prepared at the request of the Interim Commission. The fisheries report was drafted by representatives from Canada, the United States, Newfoundland, Iceland, and Norway.

Twenty-three representatives of nations<sup>1/</sup> interested in fisheries made up the Fisheries Committee at Quebec. Under the guidance of the Chairman, the Honorable Thor Thors, Icelandic Minister to the United States, this committee discussed the technical report at length, revised some sections, added others, and concluded its deliberations with the following recommendations<sup>2/</sup> to FAO for its fisheries program:

Fisheries is one of the first, if not the first, food-producing industry to be affected by the cessation of belligerent action and by the suddenness of this change. The unbalancing effect of war, which thrust upon one-half of the world's fish-producing nations the task of keeping up production to the levels achieved by a whole world, and now the sudden reversion--the liberation of the seas and the liberation of effort--have sharply emphasized the problems of distribution and have focused attention on the faults in the distribution mechanism.

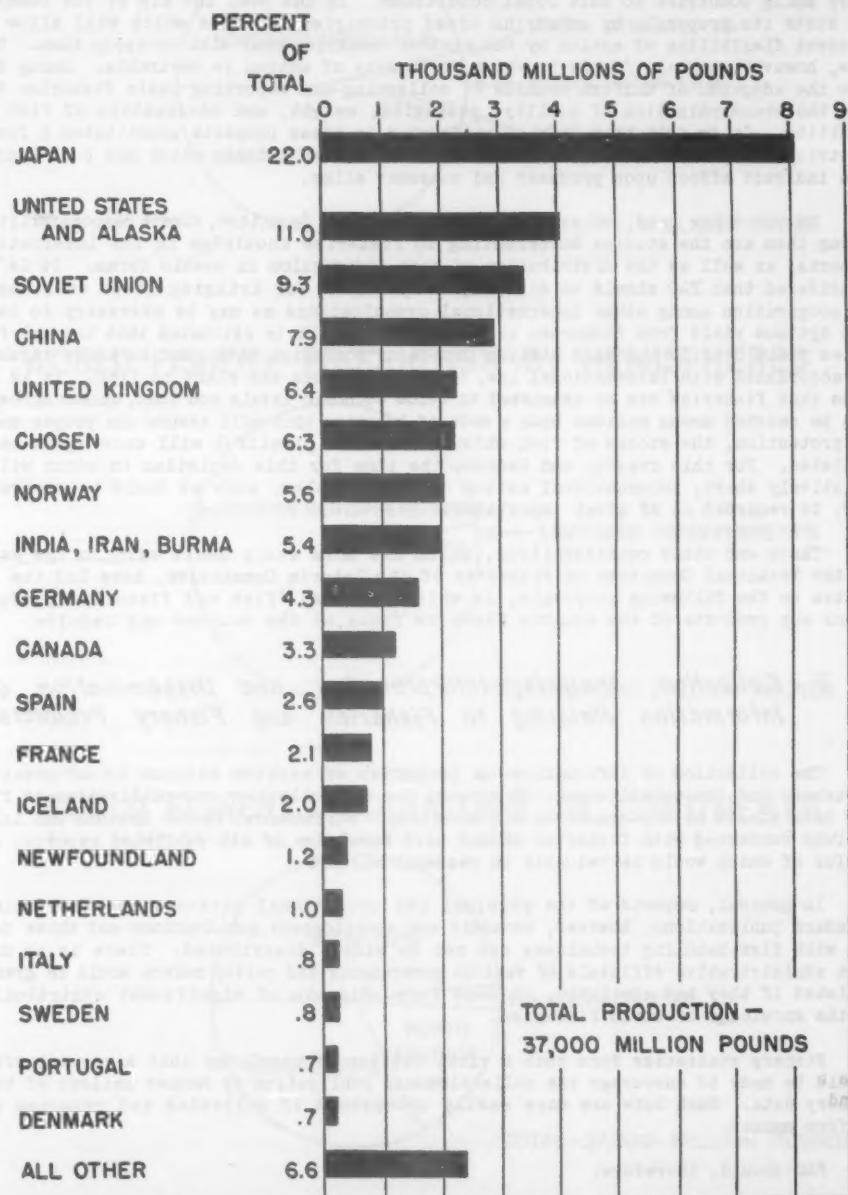
The Fisheries Committee has borne this in mind in its approach to its work. It has realized the complexities and the intricacies and has deemed it to be its duty to render such advice to Commission A as would enable the Commission to make recommendations to the Conference regarding some of the approaches that can be made to the problems surrounding production, distribution, and the ultimate use of fish and fish products within the framework of the Food and Agriculture Organization.

In so doing, it has borne in mind that FAO is a developing organization and that its beginnings can only foreshadow its ultimate achievements. With this thought in mind, the Committee's suggestions for the initial activities of the Organization have been framed with caution and have been limited to those that the Committee believes will be within the competence of the Organization during its early stages and will, at the same time, enable it to render practical and useful service to the Member nations in the field of fisheries.

<sup>1/</sup> Australia, Belgium, Canada, China, Czechoslovakia, Denmark, France, Guatemala, Greece, Iceland, India, Iraq, Mexico, Netherlands, New Zealand, Norway, Panama, Philippines, Union of South Africa, USSR, United Kingdom, United States, and Venezuela.

<sup>2/</sup> Report of Committee IV (Fisheries) to Commission A, Doc. 142, A/IV/5, October 27, 1945.

**FIGURE 1**  
**WORLD COMMERCIAL FISHERY PRODUCTION**  
**BY COUNTRIES**



SOURCE: U.S. FISH AND WILDLIFE SERVICE

It is realized that Member governments themselves, acting within their administrative and legislative spheres, will be largely responsible for bringing into practical being the reforms which may come as a result of the work of the Food and Agriculture Organization. The effectiveness of agreements reached, under the encouragement, or the auspices, of FAO, will depend upon the willingness and ability of governments to implement recommendations. Undoubtedly, the application of these recommendations will vary among countries to suit local conditions. It has been the aim of the Committee to state its proposals by embodying broad principles in words which will allow sufficient flexibility of action by the various countries that wish to apply them. There are, however, certain fields in which uniformity of action is desirable. Among these are the adoption of uniform methods of collecting and reporting basic fisheries data, and the standardization of quality, packaging, weight, and designation of fish commodities. It is felt that lack of uniformity in these respects constitutes a form of restriction upon the free flow of commodities between nations which has both a direct and indirect effect upon producer and consumer alike.

On the other hand, FAO has, in the opinion of the Committee, direct responsibilities. Among them are the studies contributing to fisheries knowledge in its international aspects, as well as the distribution of such information in usable forms. It is also considered that FAO should be directly responsible for bringing about such degrees of cooperation among other international organizations as may be necessary to insure the optimum yield from fisheries in the high seas. It is estimated that the sea fisheries yield over 30 thousand million pounds of food fish each year in areas in which, in accordance with international law, every nation has the right to fish. It is also true that fisheries can be exhausted to below economic levels and that, unless agreement can be reached among nations upon a mode of behavior that will assure the proper amount of protection, the stocks of fish which are now so plentiful will once again become depleted. For this reason, and because the time for this depletion to occur will be relatively short, international action on this problem, such as could be secured by FAO, is regarded as of great importance.

These and other considerations, which are more fully dealt with in the Report of the Technical Committee on Fisheries of the Interim Commission, have led the Committee to the following proposals, in which the term "fish and fisheries products" means any products of the aquatic flora or fauna as the context may require.

### *I - Collection, Analysis, Interpretation, and Dissemination of Information Relating to Fisheries and Fishery Products*

The collection of information on fisheries of various nations is of great importance, and the establishment of systems for the collection and publication of fishery data should be encouraged in all countries. Furthermore, Member nations and institutions concerned with fisheries should have knowledge of all published reports, summaries of which would be valuable to research workers.

In general, reports of the physical and nutritional sciences are available in standard publications; however, economic and sociological publications and those dealing with fish-handling techniques are not so widely distributed. There is no doubt that administrative officials of various governments and policy makers would be greatly assisted if they had available, in some form, digests of significant contributions to the knowledge of world fisheries.

Fishery statistics form such a vital section of knowledge that a special effort should be made to encourage the collection and publication by Member nations of basic fishery data. Such data are more easily understood if collected and reported in a uniform manner.

FAO should, therefore,

- (1) encourage provision for exchange of fisheries publications between various countries;

FIGURE 2  
WORLD FISHERY PRODUCTION BY WATERS

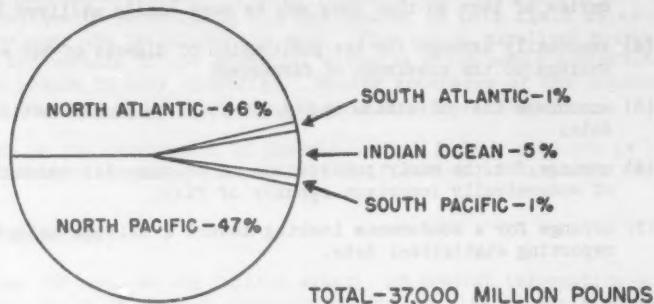


FIGURE 3  
WORLD FISHERY PRODUCTION BY HEMISPHERES

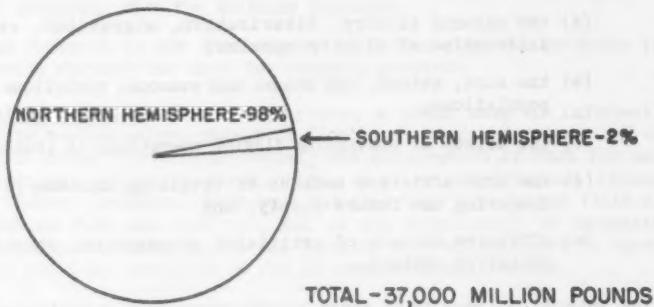
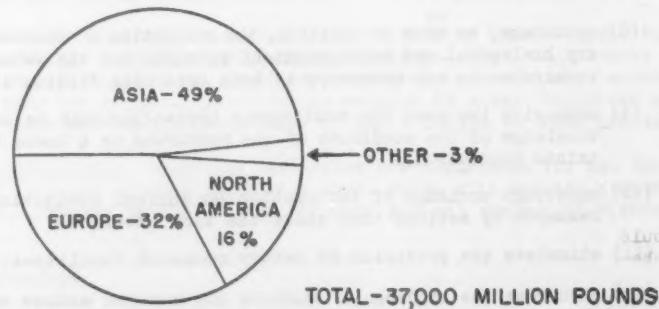


FIGURE 4  
WORLD FISHERY PRODUCTION BY CONTINENTS



- (2) arrange for the publication of a classified catalog of existing fishery data to be supplemented from time to time;
- (3) encourage agencies publishing reports relating to fisheries to print summaries of them so that they may be more easily utilized by research workers;
- (4) eventually arrange for the publication of digests of new and important contributions to the knowledge of fisheries;
- (5) encourage the collection and publication by Member nations of basic fishery data;
- (6) arrange for the early publication of recommended nomenclature and synonyms of economically important species of fish;
- (7) arrange for a conference looking toward a uniform method of collecting and reporting statistical data.

## *II-Scientific, Technological, Sociological, and Economic Research Relating to Fisheries and Fishery Products*

(A) Biological and hydrographical research. Fundamental to the intelligent consideration of fishery resources are investigations to determine:

- (a) the natural history, distribution, migrations, and environmental relationships of fishery species;
- (b) the size, extent, and annual and seasonal variations in abundance of fish populations;
- (c) the effect of continuing fishing operations in abundance;
- (d) the most efficient methods of obtaining maximum production without endangering the future supply; and
- (e) effective methods of artificial propagation, stocking, and disease and pollution control.

The methods and results of these coordinated phases of biological and hydrographical research had begun to attain exact and fruitful levels immediately prior to the war. The scope and magnitude of such research varied considerably among the various primary fishing nations of the world, and some conducted none at all. In no country was the extent of such research commensurate with the magnitude of the fishery resources.

FAO should, therefore,

- (8) encourage, as soon as possible, the resumption of suspended or curtailed fishery biological and hydrographical research and the establishment of such new researches as are necessary to keep pace with fishing activity;
- (9) emphasize the need for continuous investigations to maintain at all times knowledge of the condition of the resources as a basis for perpetuating sustained production;
- (10) encourage exchange of information on current activities and cooperation in research by nations that share the same resources;
- (11) stimulate the provision of better research facilities;
- (12) encourage the exchange of students and research workers among nations in order to promote better opportunities for scientific training as well as to insure the coordination of activities and the improvement of research techniques.

(B) Nutritional and pharmacological research. Research done heretofore, designed to identify and appraise the nutritional components of fishery products, appears to be fairly adequate with respect to protein, fat, mineral content, certain of the essential vitamins, and digestibility. A large volume of this information is available, and scientists continue to investigate all new phases in this field as advances in international knowledge and techniques are made. Fish are an excellent source of proteins, minerals, and certain of the essential vitamins which would contribute to the well-being of the people in many countries. Better knowledge of the preparation of fish for culinary purposes would increase the consumption of fish.

Research done on the development of pharmacological fishery products is less adequate, but such development contributes to diversification of the uses for fishery products.

FAO should, therefore,

- (13) encourage the use, to the fullest extent, of present information on the nutritional value of fishery products and the results of new studies as they are completed, in order to popularize fish as an excellent source of protein, minerals, and certain of the essential vitamins;
- (14) encourage studies to bring about increased consumption of fish, particularly where the present diet consists largely of cereals and pulses;
- (15) encourage the exchange of information on the most satisfactory and attractive means of preparing fish for culinary purposes;
- (16) encourage research on the development of pharmacological products in order to diversify further the uses for fishery products.

(C) Technological research. In recent years, a great mass of information has been assembled on the technological phases of fish production and processing covering the handling of fish aboard the boat or vessel; the preparation of fish for market by icing, freezing, salting, drying, canning, etc.; and the warehousing, storage, and transportation of fishery products. Much work has also been done in the field of fishery byproducts, such as fish meal and oil, and in the development of mechanical devices for their preparation. While much still remains to be accomplished in this field, it is believed that existing knowledge is far in advance of application.

FAO should, therefore,

- (17) direct its efforts toward securing the adoption of the improved methods which have been, or will be, developed. This could be achieved through the establishment of some form of clearing house for periodical reports on research and on relevant patents, thus making available up-to-date information on the scientific handling of fishery products;
- (18) sponsor periodic international conference of fishery technologists to discuss the problems arising in the various countries. This would enable workers who are actively engaged in fishery research to become more widely acquainted with the problems confronting workers in other countries and to exchange ideas that could contribute to the solution of such problems.

(D) Research institutions. Existing facilities are inadequate for the needs of fishery research if it is to be prosecuted on a scale which will develop fishery resources to the full. Further development of centers for all phases of fishery research is required.

FAO should, therefore,

- (19) encourage, through cooperation with the interested international, national, or private bodies, further development of existing research centers and the establishment of new centers in the major producing regions and in areas where fisheries might be more fully developed. Among other activities, these institutions could serve as the focal points for conducting systematic fish-

ery exploratory work to locate virgin fishing grounds and for demonstrating newer techniques of producing, processing, and marketing marine products. They could also study biological and hydrographical, economic, and technical problems of special concern to the areas in which they are located; and they could function in cooperation with existing fishery councils. The operation of research vessels would form an important part of such work.

(E) Sociological and economic research. Since, in many instances, fishermen and shore workers are in the low-income group of labor, more attention should be given to helping them improve their general well-being. The problem of full employment is also vital to the postwar world. Very few studies have been made in the field of fishery economics, but the solution of many fishery problems must depend upon such knowledge.

FAO should, therefore,

(20) cooperate with such international bodies as those concerned with labor, health, and education to encourage the initiation of studies on such subjects as the relation of fishery methods to production and employment, to the general well-being and public health, to occupational hazards and diseases, and to opportunities for education and community life;

(21) encourage the primary fish-producing and fish-consuming nations to undertake studies in the field of fishery economics which should extend not only to the economics of production, processing, and distribution (involving studies related to costs, prices, and investments) but also to consumption. These should include problems of collective bargaining and labor organization, recruitment and labor exchange, social security, employment under "lay systems" or fixed wages, living conditions and adequacy of income, insurance laws, credit unions, and cooperatives.

### *III-Improvement of Education Relating to Fisheries and Fishery Industries and the Spread of Knowledge of Fishery Science and Practice*

Available facilities for the training of fishery personnel in all phases of production, processing, and distribution are very limited, and improvement of education relating to fisheries and fishery industries is important to the full development of fishery resources.

FAO should, therefore,

(22) encourage the establishment of fishery schools and suitable fishery courses at appropriate institutions. As in the case of agricultural schools in many countries, these could serve as training centers for persons specializing in fisheries. The schools should also be centers for specialized fishery courses and for extension work for the dissemination of information to fishermen and shore workers on all phases of production, processing, and distribution.

### *IV-Conservation and Development of Fishery Resources*

(A) Conservation. Fishery conservation problems on the high seas are international in character, but because the problems of conservation are different in the many areas involved, it is considered preferable for any international action for conservation and management to be established on a regional basis. There, should, however, be a free interchange of ideas and information between such regional authorities in order to assist in bringing about a wider degree of coordination and interest.

FAO should, therefore,

(23) stimulate interest in fishery research in the field of conservation;

- (24) encourage international forms of cooperation and management with a view to the greater future utilization of fishery resources;
- (25) cooperate for this purpose with other international bodies concerned with fisheries;
- (26) explore the possibility of eventually co-ordinating the activities of these organizations under FAO auspices;
- (27) invite Member nations to consider the desirability of arranging periodic conferences between regional authorities, including established national and international councils for the study of the sea;
- (28) lend all possible support to the development of international programs of cooperative research, and, wherever necessary, of joint regulatory action on a regional basis to conserve and bring about the proper management of fishery resources;

(B) Improvement of fishing. The full use of fishery resources depends to a large degree on the development of fishery techniques best adapted to the many different conditions. Progress in such development might be accelerated by a better exchange of information.

FAO should, therefore,

- (29) encourage practical demonstrations of modern fishing vessels and gear. The institutions referred to in section (D) of the second section of the recommendations, among others, could well serve as centers for these demonstration activities. The vessels and equipment could also be used to determine the potentialities of virgin areas;
- (30) encourage the full exchange, directly or through FAO, of information regarding advances in the design of fishing craft and of fishing gear.

(C) Fish culture. The full use of fishery resources depends not only on the management of fisheries to obtain the maximum yield in perpetuity and improvement of fishing techniques, but also on the improvement of conditions for fish reproduction and growth.

FAO should, therefore,

- (31) encourage the adoption of suitable techniques of fish culture wherever facilities and conditions for the propagation of fish render such programs practicable.

#### ***V - Improvement of the Processing, Marketing, and Distribution of Fishery Products***

The fundamental problem of irregularity of supply should be the concern of all nations. More efficient methods of catch must be employed and, above all, work must continue on the application of newly developed methods of preservation which can act as a buffer against fluctuations in the supply of raw material. These, coupled, with improvements in transportation and in distribution systems, would mean a more regular flow of fishery products to the consumer, which is one of the essentials for any considerable expansion in consumption.

(A) Processing. Processing covers the entire field of fish preservation, including freezing, canning, drying, salting, smoking, and the manufacture of fish by-products. As has already been mentioned, a wealth of information is available on newer and more efficient methods of processing fishery products.

FAO should, therefore,

(32) encourage the assembling of this information in usable form for dissemination to Member governments;

(33) where the need exists, encourage Member governments to demonstrate to their peoples, the newer processing methods and techniques. This might be accomplished by the assignment of qualified experts to Member countries upon request. In this connection, the possibilities of using the institutions referred to in section (D) of the second section of the recommendations, should not be overlooked.

(B) Marketing and distribution. There is a wide spread between the landed value of fish and its retail price. Fish, one of the least expensive food products at the point of production, becomes one of the more expensive foods in the retail store. Many reasons have been advanced for this situation, but the fact remains that it retards consumption. Some studies of causative factors in the chain of marketing and distribution have been made but they have not led to a solution. However, studies might be undertaken further to insure the production of wholesome products standardized, where possible, with respect to quality, packaging, weight, and designation.

FAO should, therefore,

(34) encourage the extension of these studies for the purpose of acquiring knowledge and recommending procedures that will bring fish within the reach of low-income consumers. In this connection, qualified experts might be assigned to Member countries upon request.

## *VI-Adoption of Policies for the Provision of Adequate Fishery Credits, National and International*

Fishery industries in general are undercapitalized; however, technical advances should go a long way toward removing certain of the great risks that have militated against the investment of capital. The pursuit of technical progress will be national in scope. On the other hand, countries where lack of protein is an outstanding national deficiency may stand in need of international credits in order to develop their fisheries.

FAO should, therefore,

(35) encourage governments to grant credits to assist technical advances;

(36) be prepared to give expert advice when it is required;

(37) extend to fisheries; if such international credits are made available, the steps contemplated for agriculture (paragraphs 68 and 69 of the Interim Commission's First Report to Governments).

## *VII-Adoption of International Policies Regarding Commodity Arrangements for Fishery Products*

Commodity arrangements can be successfully applied to fishery products, especially to preserved or non-perishable types.

FAO should, therefore,

(38) study the possibilities of commodity arrangements as they affect fisheries, particularly as they promote or hinder better orientation of production and as they may be effective in providing opportunities for supplying consumer markets from the most efficient sources of production;

(39) study, as an integral part of this program, the effects of tariffs and other international barriers on world trade, as well as the effect of abnormal

fluctuations in the exchange rates, which restrict the production, distribution, and consumption of fishery products;

(40) furnish such information to the governments of producing and consuming countries and to other interested authorities.

### *VIII - Advisory Committee on Fisheries*

In dealing with the many problems likely to arise, particularly during the initial stages of setting up the organization of FAO, the Director-General and his deputies would benefit from consultation with an expert committee on fisheries.

FAO should, therefore,

(41) appoint an advisory committee on fisheries.

Fishery products were specifically mentioned in the reports of two other committees. The Statistics Committee<sup>1/</sup> stated as follows:

"FAO should encourage the publication by Member nations of basic fishery data, with particular attention to those areas which are not at present covered by existing international organizations. The statistics should be assembled by areas and localities from which the fish are obtained. Duplication in quantities of fish landed should be eliminated.

"It should encourage and assist in the exchange among various countries of statistical publications on fisheries. To assist in this FAO should arrange for the publication of a classified catalogue of existing statistical data on fisheries and make provisions for periodically bringing up to date this publication.

"Early publication is needed of statistics on the utilization of fish--the data to include landings (in terms of whole fish) and weight of product marketed. Statistics should be secured to indicate the final use of fish; e.g., human consumption, animal feed, etc. Liver oil should be reported in terms of vitamin A and D potency as well as weight, and industrial use should be distinguished from human consumption.

"Uniform definitions of species of fish, conversion factors to be used to convert the weights of processed products to terms of whole fish, and methods of measuring fish consumption are urgently needed. To contribute to uniform definition of species of fish, an early publication is recommended of nomenclature and synonyms of economically important species of fish.

"Periodical surveys covering the types of gear used and the standard of living of workers in the fisheries should be arranged.

"The loan of experts is especially pertinent with respect to fishery statistics and also early conferences on these matters are considered advisable."

At the request of the Fisheries Committee, the Marketing Committee was requested to give special consideration to probable apparent surpluses of fishery products. In its report<sup>2/</sup>, the Marketing Committee therefore suggested that FAO should:

"Investigate, in respect of particular commodities (such as cotton, wool, and fish) the special circumstances which lead to the development of immediate and prospective surpluses or shortages. In particular, the Food and Agriculture Organization should wherever possible relate the treatment of surpluses to the satisfaction of nutritional and other human needs."

FAO's program at present is purely advisory. It will collect and disseminate information, it will offer recommendations, and it will assist Member nations upon request. It

<sup>1/</sup>Report of Committee VI (Statistics) to Commission A, Document 160, A/VI/12, October 28, 1945.

<sup>2/</sup>Report of Committee V (Marketing) to Commission A, Document 152, A/V/7, October 27, 1945.

TABLE I--PRODUCTION PER CAPUT IN VARIOUS COUNTRIES

| COUNTRY                         | PER CAPUT<br>PRODUCTION<br>(POUNDS) | COUNTRY                        | PER CAPUT<br>PRODUCTION<br>(POUNDS) |
|---------------------------------|-------------------------------------|--------------------------------|-------------------------------------|
| ICELAND .....                   | 6,223                               | SPAIN .....                    | 37                                  |
| NEWFOUNDLAND .....              | 1,525                               | UNITED STATES AND ALASKA ..... | 35                                  |
| NORWAY .....                    | 680                                 | VENEZUELA .....                | 33                                  |
| JAPAN .....                     | 111                                 | GERMANY .....                  | 20                                  |
| CANADA .....                    | 109                                 | FRANCE .....                   | 20                                  |
| CHOSEN .....                    | 100                                 | SOVIET UNION .....             | 18                                  |
| KWANTUNG LEASED TERRITORY ..... | 67                                  | PHILIPPINE ISLANDS .....       | 11                                  |
| DENMARK .....                   | 63                                  | ARGENTINA .....                | 9                                   |
| SWEDEN .....                    | 49                                  | MEXICO .....                   | 8                                   |
| UNITED KINGDOM .....            | 48                                  | ITALY .....                    | 7                                   |
| BRITISH MALAYA .....            | 39                                  | CHINA .....                    | 5                                   |
| NETHERLANDS .....               | 39                                  | INDIA, IRAN, BURMA .....       | 5                                   |
| PORTUGAL .....                  | 37                                  | BRAZIL .....                   | 3                                   |

is understood that its fisheries program probably will be carried out by a separate division within the Organization.

TABLE II--WHALE PRODUCTION

| COUNTRY              | TOTAL<br>NUMBER<br>OF WHALES | OIL<br>PRODUCTION<br>(BARRELS*) | EXPEDITIONS       |                  |                 |
|----------------------|------------------------------|---------------------------------|-------------------|------------------|-----------------|
|                      |                              |                                 | SHORE<br>STATIONS | FACTORY<br>SHIPS | KILLER<br>BOATS |
| BRITISH EMPIRE ..... | 11,335                       | 897,741                         | 2                 | 9                | 81              |
| NORWAY .....         | 11,671                       | 853,867                         | 3                 | 12               | 99              |
| JAPAN .....          | 7,540                        | 483,476                         | -                 | 6                | 49              |
| GERMANY .....        | 5,066                        | 374,149                         | -                 | 5                | 41              |
| UNITED STATES .....  | 1,338                        | 102,388                         | 2                 | 1                | 13              |
| PANAMA .....         | 907                          | 68,853                          | -                 | 1                | 8               |
| ARGENTINA .....      | 1,024                        | 66,826                          | 1                 | -                | 6               |
| SOVIET UNION .....   | 476                          | 18,854                          | -                 | 1                | 3               |
| CHILE .....          | 407                          | 5,797                           | 1                 | 1                | 4               |
| PORTUGAL .....       | 389                          | 6,920                           | -                 | -                | -               |
| DENMARK .....        | 178                          | 5,197                           | 2                 | -                | 7               |
| ICELAND .....        | 130                          | 3,764                           | 1                 | -                | 3               |
| TOTAL .....          | 40,662                       | 2,887,832                       | 12                | 36               | 314             |

\*ONE BARREL = 1/6 LONG TON.

The immediate effect of FAO on international fisheries may not be great because it is a new organization just developing a program. The long term effect, however, should be beneficial, particularly if FAO is wholeheartedly supported by the Member nations, because its aim is to promote cooperation in the international field rather than competition.

0-0-0

PERMANENT ADDRESSES AND TITLES OF THOSE ATTENDING FISHERIES COMMITTEE MEETINGS

AUSTRALIA:

Dr. M. F. Day,  
Australian Scientific Liaison Office,  
Australian Legation, WASHINGTON, D. C.

Mr. J. U. Garside,  
Australian Government Trade Commissioner,  
NEW YORK, N. Y.

BELGIUM:

Mr. Georges Lalmand,  
Chargé de mission of the Belgian Ministry of Food,  
31 Schoenmarkt, ANTWERP, BELGIUM.

CANADA:

Dr. D. B. Finn,  
Deputy Minister of Fisheries,  
OTTAWA, ONTARIO.

Dr. A. T. Cameron, Professor of Biochemistry,  
Faculty of Medicine, University of Manitoba,  
WINNIPEG, MANITOBA. (Chairman, Fisheries Research Bd. of Canada)

## PERMANENT ADDRESSES AND TITLES OF THOSE ATTENDING FISHERIES COMMITTEE MEETINGS (CONT.)

CANADA (Cont.): Dr. Arthur Labrie,  
Deputy Minister, Dept. of Maritime Fisheries,  
QUEBEC, P. Q.

Mr. C. J. Morrow,  
Vice-President, National Sea Products Limited,  
LUNENBURG, NOVA SCOTIA.

Mr. S. K. Murray,  
Asst. General Manager, B. C. Packers Limited,  
Box 939, VANCOUVER, B. C.

Dr. J. B. Collip,  
Director, Research Institute of Endocrinology,  
McGill University, MONTREAL, P. Q.  
(Chairman, Associate Committee on Medical Research of the National  
Research Council of Canada)

Dr. Georges Prefontaine,  
Directeur de l'Institut de Biologie,  
Universite de Montreal, MONTREAL, P. Q.

CHINA: Mr. Ecom K. F. Wang,  
Bureau of Animal Husbandry and Fishery,  
Ministry of Agriculture and Forestry, CHUNGKING, CHINA.

DENMARK: Mr. Mogens Jul,  
Forstander for Fiskeridirektoratets,  
Forsogslaboratorium,  
Oster Voldgade 10, KOBENHAVN K.

Mr. A. P. Jacobsen,  
Department of Agriculture,  
COPENHAGEN, DENMARK.

FRANCE: Mr. M. Terrin,  
Directeur des Pêches maritimes,  
Ministere de la Marine marchande,  
3 Place de Fontenoy,  
PARIS VII, FRANCE

GREECE: Mr. C. Vasmadzides,  
Agricultural Bank of Greece,  
ATHENS, GREECE.

ICELAND: Hon. Mr. Thor Thors,  
Legation of Iceland,  
WASHINGTON, D. C.

INDIA: Dr. Bainsi Prashad, O. B. E.,  
Fisheries Development Adviser to the Govt. of India,  
Department of Agriculture, Secretariat,  
NEW DELHI, INDIA.

MEXICO: Ing. Alfonso Gonzalez Gallardo,  
Sub-Secretario de Agriculture y Fomento,  
MEXICO, D. F.

## PERMANENT ADDRESSES AND TITLES OF THOSE ATTENDING FISHERIES COMMITTEE MEETINGS (CONT.)

NETHERLANDS: Dr. D. J. van Dijk  
Chief, Division of Fisheries,  
Ministry of Agriculture, Fisheries and Food,  
18-20, Wassenaarscherneg,  
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NEW ZEALAND: Mr. G. M. Pottinger,  
Secretary, Export Marketing Division,  
P. O. Box 417,  
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Mr. W. L. Middlemass,  
311 Daly Avenue,  
OTTAWA, ONTARIO.

NORWAY: Mr. Olav Notevarp, M. Sc.,  
Director of the Norwegian Fisheries Research Station,  
HERGEN, NORWAY.

Mr. G. M. Gerhardsen,  
Adviser to the Director of the Norwegian Fisheries,  
Stove Parkvei 34, HERGEN, NORWAY.

PANAMA: Mr. J. E. Heurtematte,  
Commercial Counselor, Embassy of Panama,  
WASHINGTON, D. C.

PHILIPPINES: Dr. Leopoldo T. Ruiz,  
Member, Technical Committee to the President of the Philippines,  
Philippine Commonwealth,  
1617 Mass. Ave., N. W., WASHINGTON, D. C.

UNION OF SOUTH AFRICA: Mr. G. M. Dreosti,  
Officer in Charge of Dehydration and Cold Storage,  
Union of South Africa,  
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Mr. D. J. Gardner,  
South African Legation,  
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U. S. S. R.: Mr. E. Nikishin,  
Soviet Purchasing Commission,  
1610 Park Road, WASHINGTON, D. C.

UNITED KINGDOM: Dr. John A. Lovern,  
Dept. of Scientific and Industrial Research,  
Torry Research Station, ABERDEEN, SCOTLAND.

Mr. P. D. H. Dunn,  
Principal Assistant Secretary,  
Ministry of Agriculture and Fisheries,  
St. Stephen's House, Victoria Embankment, LONDON S. W. 1.

Mr. Ray Gushue,  
Chairman, Nfld. Fisheries Board,  
ST. JOHN'S, NEWFOUNDLAND.

UNITED STATES: Mr. Andrew W. Anderson,  
Chief, Division of Commercial Fisheries,  
Fish and Wildlife Service, U. S. Dept. of the Interior,  
WASHINGTON 25, D. C.

## PERMANENT ADDRESSES AND TITLES OF THOSE ATTENDING FISHERIES COMMITTEE MEETINGS (CONT.)

UNITED STATES (Cont.): Mr. E. G. Gale,  
Associate Chief, Commodities Division,  
State Department, WASHINGTON 25, D. C.

VENEZUELA: Dr. M. A. Falcon-Ericeno,  
Commercial Counselor,  
Embassy of Venezuela, WASHINGTON, D. C.

SECRETARIAT: Dr. A. W. H. Needler,  
Director, Atlantic Biological Station,  
ST. ANDREWS, N. B., CANADA.

Dr. Jean-Louis Tremblay,  
Dept. of Biology, Faculte of Science,  
Laval University,  
Boulevard de l'entente, QUEBEC, P. Q., CANADA.

Miss Flora Love,  
Department of Fisheries,  
OTTAWA, CANADA.

**COMMERCIAL FISHERIES OF THE WORLD**  
**FISHERMEN, FISHING CRAFT, AND PRODUCTION BY CONTINENTS AND COUNTRIES**

| Continent and country                       | Year | No. of fishermen engaged | No. of fishing craft | Quantity (Thousands of lbs.) | Remarks  |
|---|------|--------------------------|----------------------|------------------------------|--|
| <i>North America</i>                        |      |                          |                      |                              |  |
| Canada.....                                 | 1941 | 63,745                   | 37,708               | 1,198,865                    |  |
| Central America and West Indies:            |      |                          |                      |                              |  |
| Bahamas.....                                | 1936 | 390                      | 65                   | 1,275                        |  |
| Barbados.....                               | 1940 | 1,900                    | 536                  | 1,000                        |  |
| British Honduras.....                       | 1940 |                          |                      | 500                          |  |
| Costa Rica.....                             | 1940 |                          |                      | 1,000                        |  |
| Cuba.....                                   | 1940 |                          |                      | 15,000                       |  |
| Dominican Republic.....                     | 1940 |                          |                      | 1,000                        |  |
| El Salvador.....                            | 1940 |                          |                      | 700                          |  |
| French West Indies.....                     | 1940 |                          |                      | 9,000                        |  |
| Guatemala.....                              | 1940 |                          |                      | 100                          |  |
| Haiti.....                                  | 1940 |                          |                      | 2,000                        |  |
| Honduras.....                               | 1940 |                          |                      | 300                          |  |
| Jamaica.....                                | 1940 | 1,200                    | 400                  | 10,000                       |  |
| Leeward and Windward Islands.....           | 1940 | 1,437                    | 327                  | 3,600                        | (Men and craft for Leeward Is. only)   |
| Netherlands West Indies.....                | 1940 |                          |                      | 1,000                        |  |
| Nicaragua.....                              | 1940 |                          |                      | 300                          |  |
| Panama.....                                 | 1940 |                          |                      | 3,000                        |  |
| Puerto Rico.....                            | 1940 | 1,403                    | 716                  | 3,080                        |  |
| Trinidad and Tobago.....                    | 1940 | 2,870                    | 948                  | 6,000                        |  |
| Virgin Islands (British).....               | 1940 | 200                      | 72                   | 160                          |  |
| Virgin Islands (United States).....         | 1940 | 405                      | 186                  | 616                          |  |
| Greenland.....                              | 1937 |                          |                      | 6,678                        | Exports only   |
| Mexico.....                                 | 1940 |                          | 2,195                | 155,141                      | 1941 production reported at 109.98 million pounds valued at 4,990,029 dollars    |
| Newfoundland.....                           | 1937 | 34,458                   |                      | 450,000                      | Quantity excludes whales and seals   |
| St. Pierre and Miquelon.....                | 1942 |                          | 144                  | 1,638                        | Salted green fish only   |
| United States and Alaska.....               | 1940 | 124,795                  | 71,810               | 4,059,524                    | 1943 production estimated at 4,000 million pounds, valued at 180 million dollars |
| <b>TOTAL, North American countries.....</b> |      |                          |                      |                              | <b>5,981,477</b>   |
| <i>South America</i>                        |      |                          |                      |                              |  |
| Argentina.....                              | 1940 | 2,000                    | 824                  | 121,122                      | 1942 production reported at 126.8 million pounds; fishermen and craft for 1943   |
| Brazil.....                                 | 1940 | 80,002                   | 31,300               | 134,252                      | Fishermen and craft for 1938; 1943 production estimated at 176 million pounds    |
| British Guiana.....                         | 1940 | 602                      | 384                  | 500                          | Estimated  |
| Chile.....                                  | 1942 | 5,617                    | 2,410                | 70,869                       |  |
| Colombia.....                               | 1940 |                          |                      | 3,500                        |  |
| French Guiana.....                          | 1940 |                          |                      | 1,792                        |  |
| Peru.....                                   | 1940 | 6,568                    | 2,404                | 26,097                       |  |
| Surinam.....                                | 1940 |                          |                      | 3,748                        |  |
| Uruguay.....                                | 1934 | 313                      |                      | 6,677                        | Fishermen are for 1940; 1940 production reported at 7.3 million pounds           |
| Venezuela.....                              | 1940 |                          |                      | 100,000                      | Estimated  |
| <b>TOTAL, South American countries.....</b> |      |                          |                      |                              | <b>468,557</b>   |
| <i>Asia</i>                                 |      |                          |                      |                              |  |
| Arabia.....                                 | 1936 |                          |                      | 2,003                        | Exports only   |
| British Malaya.....                         | 1940 | 27,069                   | 11,167               | 196,768                      |  |
| Ceylon.....                                 | 1935 | 1,493                    | 6,959                | 1,800                        | Estimated  |
| China.....                                  | 1939 |                          |                      | 2,890,000                    | "  |
| Chosen.....                                 | 1939 |                          |                      | 2,300,000                    | Quantity estimated   |
| Hawaii.....                                 | 1937 | 4,000                    | 999                  | 19,706                       | Fishermen and craft estimated  |
| India, Iran, Burma.....                     | 1932 |                          |                      | 2,000,000                    | Estimated  |
| Indo-China.....                             | 1937 |                          |                      | 79,636                       | Exports only   |
| Japan.....                                  | 1936 | 1,102,502                | 366,267              | 8,107,816                    |  |
| Kwangtung Leased Territory.....             | 1937 | 305,000                  |                      | 132,704                      | Fishermen and craft for 1941; 1942 production reported at 3.9 million pounds     |
| Palestine.....                              | 1940 | 1,663                    | 530                  | 3,821                        | Exports only   |
| <b>TOTAL, Asiatic countries.....</b>        |      |                          |                      |                              | <b>18,084,467</b>  |

(Continued on next page)

## COMMERCIAL FISHERIES OF THE WORLD—Continued

| Continent and country                    | Year | No. of<br>fishermen<br>engaged | No. of<br>fishing<br>craft | Quantity<br>(Thousands<br>of lbs.) | Remarks  |
|--|------|--------------------------------|----------------------------|------------------------------------|--|
| <i>Europe</i>                            |      |                                |                            |                                    |  |
| Belgium                                  | 1938 | 1,784                          | 445                        | 86,254                             | Fishermen and craft for 1936   |
| Bulgaria                                 | 1940 |                                |                            | 15,871                             |  |
| United Kingdom:<br>England and Wales     | 1938 |                                |                            | 1,711,704                          | Quantity does not include data on crabs,<br>lobsters, and oysters                |
| Scotland                                 | 1938 |                                |                            | 592,938                            | "  |
| Ireland                                  | 1941 | 8,865                          | 3,137                      | 30,889                             | "  |
| Czechoslovakia                           | 1937 |                                |                            | 6,500                              |  |
| Danzig                                   | 1931 | 2,100                          | 811                        | 6,303                              |  |
| Denmark                                  | 1940 |                                | 15,350                     | 250,800                            | Craft for 1937   |
| Estonia                                  | 1935 |                                |                            | 40,477                             | 1943 production reported at 22 million pounds                                    |
| Faroe Islands                            | 1938 | 2,930                          | 1,850                      | 55,100                             | Estimated  |
| Finland                                  | 1933 |                                |                            | 79,362                             |  |
| France                                   | 1937 | 73,989                         | 23,201                     | 788,400                            |  |
| Germany                                  | 1938 | 30,000                         | 20,000                     | 1,596,919                          | Fishermen and craft estimated; includes salt-<br>water species only              |
| Greece                                   | 1937 | 6,860                          | 2,015                      | 39,537                             | Fishermen estimated; 1938 production reported<br>at 51 million pounds            |
| Iceland                                  | 1942 | 5,003                          | 708                        | 740,514                            | Fishermen and craft are for 1943   |
| Italy                                    | 1937 | 108,000                        | 42,051                     | 304,000                            | Fishermen estimated  |
| Latvia                                   | 1932 | 3,907                          | 524                        | 29,752                             |  |
| Lithuania                                | 1938 |                                |                            | 5,788                              |  |
| Maltese Islands                          | 1938 | 1,300                          | 700                        | 2,380                              |  |
| Netherlands                              | 1939 | 17,570                         | 3,443                      | 350,367                            |  |
| Norway                                   | 1939 | 115,000                        | 74,580                     | 2,041,620                          | Estimated<br>1942 production reported at 1,500 million<br>pounds                 |
| Poland                                   | 1937 | 1,822                          | 953                        | 30,822                             |  |
| Portugal                                 | 1940 | 36,837                         | 13,630                     | 260,588                            | Fishermen are for 1941; 1941 production re-<br>ported at 403.5 million pounds    |
| Rumania                                  | 1938 |                                |                            | 79,738                             | 1942 production reported at 89.6 million pounds                                  |
| Spain                                    | 1940 | 195,000                        | 40,000                     | 967,252                            | 1943 production reported at 979 million<br>pounds; fishermen and craft estimated |
| Sweden                                   | 1939 | 23,114                         | 20,378                     | 292,866                            | 1941 production reported at 249.4 million<br>pounds                              |
| Switzerland                              | 1942 | 185                            |                            | 631                                |  |
| Turkey                                   | 1935 |                                |                            | 51,000                             | Quantity estimated   |
| Soviet Union (Europe only)               | 1938 |                                |                            | 1,304,160                          |  |
| Yugoslavia                               | 1936 | 18,294                         | 6,293                      | 14,300                             | 1938 production reported at 17.6 million pounds                                  |
| TOTAL, European countries                |      |                                |                            | 11,776,832                         |  |
| <i>Africa</i>                            |      |                                |                            |                                    |  |
| Algeria                                  | 1936 | 3,609                          | 1,081                      | 44,780                             |  |
| Angola                                   | 1936 |                                |                            | 31,517                             | Sardines only  |
| Belgian Congo                            | 1928 |                                |                            | 23,681                             | Exports only   |
| Canary Islands                           | 1931 | 2,500                          | 250                        | 11,638                             | Quantity estimated   |
| Cyrenaica                                | 1928 |                                |                            | 11,758                             | Sponges, sardines, and tuna only   |
| Egypt                                    | 1938 | 52,800                         | 10,022                     | 70,767                             |  |
| French Morocco                           | 1933 | 2,323                          | 511                        | 42,580                             |  |
| French West Africa                       | 1935 |                                |                            | 23,212                             |  |
| Kenya                                    | 1931 |                                |                            | 10,988                             | Exports only   |
| Morocco (Spanish and International Zone) | 1933 |                                |                            | 30,864                             |  |
| Seychelles                               | 1925 | 600                            | 350                        | 1,560                              |  |
| Southwest Africa                         | 1934 |                                |                            | 6,000                              |  |
| Tripoli                                  | 1934 |                                |                            | 1,910                              | Estimated  |
| Tunisia                                  | 1937 | 10,820                         | 3,130                      | 23,346                             | Tuna only  |
| Union of South Africa                    | 1936 | 7,400                          |                            | 60,000                             | Fishermen estimated  |
| TOTAL, African countries                 |      |                                |                            | 394,601                            |  |
| <i>Oceania</i>                           |      |                                |                            |                                    |  |
| Australia                                | 1939 | 9,081                          | 5,462                      | 72,732                             |  |
| Fiji Islands                             | 1931 |                                |                            | 2,838                              |  |
| New Zealand                              | 1939 | 2,218                          | 1,279                      | 48,400                             | 1943 production reported at 35 million pounds                                    |
| TOTAL, Oceanic countries                 |      |                                |                            | 123,970                            |  |
| GRAND TOTAL                              |      |                                |                            | 38,779,904                         |  |

NOTE: These statistical data represent a compilation from all available sources—publications (including consular reports), manuscripts, and correspondence.

## FISHERY RESOURCES OF THE UNITED STATES

Senate Document No. 51, "Fishery Resources of the United States," has just been published and made available to the public by the United States Congress. Congress has long felt the need for a condensed, readable book that would serve as a basic reference on the fisheries and fishery industries of the United States, and at its request, the Fish and Wildlife Service of the Department of the Interior has prepared an attractive illustrated book of 135 pages that will appeal to everyone. Each page tells a living story in words and pictures of an important phase of the Nation's fisheries. The book will be of interest to fishermen, processors, dealers, anglers, and the general public. It is particularly suited for use in the public schools in connection with courses in biology, geography, and civics.

Copies may be purchased at 40 cents each from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

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